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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/086,962	02/28/2002	Becky V. Berndt	P6495 US	6757

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KONRAD RAYNES VICTOR & MANN, LLP
315 SOUTH BEVERLY DRIVE
SUITE 210
BEVERLY HILLS, CA 90212

EXAMINER

NGUYEN, KIMBINH T

ART UNIT	PAPER NUMBER
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2671

DATE MAILED: 12/23/2003

4

Please find below and/or attached an Office communication concerning this application or proceeding.

TS

Office Action Summary

Application No.

10/086,962

Applicant(s)

BERNDT ET AL.

Examiner

Kimbinh T. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-14, 16-23, 25-33 and 35-39 is/are rejected.
- 7) ☒ Claim(s) 5, 15, 24 and 34 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-39 are pending in the application.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-4, 6-14, 16-23, 25-33, 35-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marks et al. (5,790,775) in view of Tawil et al. (6,625,747).

Claim 1, Marks et al. discloses a failover data path in a graphical user interface environment (col. 7, lines 11-17), comprising displaying source device (host CPU and host interface; fig. 3); displaying target device (target ID; col. 6, lines 49-53); Marks does not teach displaying a first data path between source device and target devices; however, Tawil teaches the first communication path 28 (col. 3, lines 61-62; fig. 1); in response to a failure in the first data path: indicating the failure in the first data path (col. 6, lines 5-6); displaying a failover data path (abstract, lines 10-14). (col. 7, lines 11-18). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the communication path between source and target devices as taught by Tawil into the failover operation of Marks' teaching for indicating a failover data path, because it would develop a method to identify paths and controllers to enable

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more efficient, scalable failover within a SAN (col. 2, lines 28-31). Further, **Claim 2**, Tawil discloses for source device, displaying component of application host (server; fig. 2); for target device (node 1; fig. 2), displaying component of storage system (memory storage devices 72; fig. 2). **Claim 3**, Tawil discloses eliminating the graphical display of the first data path (multipathing driver is simplified; col. 5, lines 27-28). **Claim 6**, Tawil discloses displaying a second data path between source device and target device (communication path 30; col. 3, line 62; fig. 1). **Claim 7**, Tawil discloses displaying two source devices (server: first controller 24, second controller 26; fig. 1); displaying two target devices (node 1: #64 and #68; fig. 2); displaying the first data path between a first of the two source and target devices; displaying the second data path between a second of the two source and target devices (multipathing device drivers 52, 54 and 56; fig. 2). **Claim 8**, Tawil discloses displaying two host adapters (col. 4, lines 6-10); displaying two storage units (first storage group 33 and second storage group 39, col. 5, lines 59-63; fig. 1). **Claim 9**, Tawil discloses displaying a third link between the first and second target devices (fig. 2, the link between the first port 66 and second port 70).

Claim 4, Marks discloses displaying a first link (communication link) between source device (host) and target device (col. 4, lines 35-38; col. 11, lines 54-56) and animating the first link to indicate the first data path has not failed. Marks does not teach animating the first link; however, Marks teaches the host access to the virtual device represented by the host LUN (col. 6, lines 38-53). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the virtual device for animating the first link to indicate the first data path is normal, because using

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communication link to share configuration and status information, it would allow the user directed controller management and status reporting (col. 4, lines 32-34).

Claim 10, Tawil discloses animating the third link (a signal path in a multipathing device driver) to indicate the third link is being used as a failover path (the signal path has failed or malfunctioned; col. 6, line 65 through col. 7, line 20). Tawil does not teach animating the third link, however, Tawil teaches to detect signal path failure or malfunction using a number of techniques such as assigning the port name, rerouting to change the port name (col. 6, lines 45-62; col. 7, lines 5-20) and these techniques would relate to animating. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the rerouting technique for animating the link, because it would monitor the flow of information through different signal paths (col. 4, lines 25-26).

Claims 11-14, 16-23, 25-29, the rationale provided in the rejection of claims 1-4, 6-10 is incorporated herein.

Claims 30-33 and 35-39, the rationale provided in the rejection of claims 1-4 and 6-10 is incorporated herein. In addition, Mark teaches a computer readable medium (physical storage media; col. 1, lines 16-17).

Allowable Subject Matter

4. Claims 5, 15, 24 and 34 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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The following is a statement of reasons for the indication of allowable subject matter:

The prior art does not teach ceasing the display of the first link; displaying a red-colored portion on the first link; displaying the first link using a broken line.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Kimbinh Nguyen** whose telephone number is **(703) 305-9683**. The examiner can normally be reached **(Monday- Thursday from 7:00 AM to 4:30 PM and alternate Fridays from 7:00 AM to 3:30 PM)**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Zimmerman, can be reached at (703) 305-9798.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

Or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Part II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Kimbinh Nguyen

December 10, 2003



MARK ZIMMERMAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600